WHAT IS CLAIMED IS:

1. A fluorescence reader which detects fluorescence from a sample present on a carrier or in a solution, said reader comprising:

a light source which radiates parallel light;

a projection lens which converges the light from the light source;

an objective lens which irradiates the sample with the light converged in a rear-side focal position;

an image forming lens which forms fluorescence emitted from the sample and passed through the objective lens into an image;

a light receiving pinhole disposed in an image forming position of the image forming lens; and

detector which detects the fluorescence passed through the light receiving pinhole.

2. The fluorescence reader according to claim 1, further comprising: an excitation pinhole disposed in a front-side focal position of the projection lens to shape the parallel light radiated from the light source.

3. The fluorescence reader according to claim 1, wherein a size of the image formed in the image forming position of the image forming lens is substantially equal to that of the light receiving pinhole.

4. The fluorescence reader according to claim 2, wherein a shape of the excitation pinhole and a

diameter of the light receiving pinhole are changeable.

5. The fluorescence reader according to any one of claim 1, wherein the sample comprises a fluorescent dyestuff coupled with a nucleic acid or a reagent coupled with the nucleic acid.

6. The fluorescence reader according to claim 5, wherein at least a part of the nucleic acid or one or more parts are immobilized on the carrier, and the fluorescent dyestuff is coupled with the reagent peculiarly coupled with the nucleic acid.

7. The fluorescence reader according to any one of claim 1, wherein a specimen including the samples arranged at a certain interval on the carrier moves every certain interval, and the measuring of the fluorescence and the moving of the specimen are repeated to measure a plurality of samples.